

REMARKS

Reexamination and reconsideration of the application are requested.

The examiner's rejection of claims 1-12 as being "obvious", under 35 U.S.C. 103, is respectfully traversed. The examiner rejects these claims as being unpatentable over Yoshida '042 in view of La Barge '077. Claims 2-6 depend from claim 1, and claims 8-12 depend from claim 7.

Claims 1 and 7 require that the ball nut 12 have an undercut wall 24 connecting the radially-recessed ledge 22 of the outer surface 18 and the first portion 20 of the outer surface 18 and require that the at-least-one transversely and ductilely elongated portion 30 and 32 of the flange 26 of the crossover member 14 be supported against radially-inward movement by the ledge 22 and to contact the undercut wall 24 of the outer surface 18 of the ball nut 12.

Yoshida teaches (see column 6, lines 7-12) crimping the flanges (detach preventing projections) 38 of his crossover member (bridge member) 24 after the flanges (detach preventing projections) 38 are engaged with the ledge (engaging recessed portions) 39 of the ball nut (rotary nut) 22. The Examiner correctly states that Yoshida fails to teach an undercut wall formed in the outer surface of the ball nut with the crimped portion of the crossover member engaged with (in contact with) the undercut wall. The Examiner alleges it would have been obvious to use in Yoshida the teaching of La Barge of having a ductilely elongated portion engaged with an undercut wall. Applicants respectfully disagree.

Applicants' undercut wall 24 is shown in figures 2 and 3. Having the at-least-one transversely and ductilely elongated portion 30 and 32 of the flange 26 of the crossover member 14 contacting the undercut wall 24 of the ball nut 12 prevents the crossover member 14 (which is the member having the at-least-one transversely and ductilely elongated portion) from moving radially outward with respect to the ball nut 12. The undercut wall 24 does nothing to prevent the crossover member 14 from moving radially inward with respect to the ball nut 12. It is noted

that it is the ledge 22 which supports the crossover member 14 against radially inward movement with respect to the ball nut 12.

There is no motivation to utilize an undercut wall in Yoshida. The arms 31 of the crossover member (bridge member) 24 of Yoshida prevent radially outward movement of the crossover member (bridge member) 24 with respect to the ball nut (rotary nut) 12. The crimping in Yoshida is to secure the crossover member (bridge member) 24 against radially inward movement of the crossover member (bridge member) 24 with respect to the ball nut (rotary nut) 12. An undercut wall does nothing to help against radially inward movement of the crossover member (bridge member) 24 with respect to the ball nut (rotary nut) 12.

Basically, the crossover member 14 of Applicants, as claimed in claims 1-12), can only be installed from outside the ball nut 12, wherein a later-formed at-least-one transversely and ductilely elongated portion 30 and 32 of the crossover member 14 contacts the undercut wall 24 of the ball nut 12 to prevent radially outward movement of the crossover member 14 with respect to the ball nut 12. This is opposite to the crossover member (bridge member) 24 of Yoshida which can only be installed from inside the ball nut (rotary nut) 12 (see column 6, lines 1-12), wherein the arms 31 of the ball nut (rotary nut) 12 prevent radially outward movement of the crossover member (bridge member) 24 with respect to the ball nut (rotary nut) 12, and wherein there is no motivation to provide an undercut wall in the ball nut (rotary nut) 12 which would add nothing to what the arms 31 of the Yoshida are already doing.

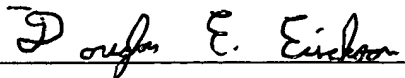
Also, La Barge does not create a ductilely elongated portion in contact with an undercut wall as alleged by the examiner. La Barge basically hammers a longer bent or curved portion of a first member into a shorter less bent or less curved portion which contacts undercut walls of a second member to prevent the first member from moving outwardly apart from the second member. There is no ductile elongation when one starts with a longer piece and ends up with a shorter piece.

Appellants request the examiner list the Yoshida patent (US 6,454,042) on the Notice of References Cited.

Serial No.: 10/001,715
Attorney Docket No.: DP-305919
Amendment

Inasmuch as each of the rejections has been answered by the above remarks, it is respectfully requested that the rejections be withdrawn, and that this application be passed to issue.

Respectfully submitted,



Douglas E. Erickson

Reg. No. 29,530

THOMPSON HINE LLP
2000 Courthouse Plaza NE
10 West Second Street
Dayton, Ohio 45402-1758
(937) 443-6814

342218